



118

SEQUENCE LISTING

<10> MCCARTHY, Sean A
<10> FRASER, Christopher C
SHARP, John D
BARNES, Thomas S
KIRST, Susan J
MYERS, Paul S
WRIGHTON, Nicholas
GOODEARL, Andrew
HOLTZMAN, Douglas A
KHODADOUST, Mehran M

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<151> 2000-05-24

<150> US 09/333,159
<151> 1999-06-14

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Phe Leu Leu Met Met Gly Val Leu Phe Cys Cys Gly Ala Gly Phe Phe
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Ile Arg Arg Arg Met Tyr Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe
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aaacgcctag atccctgaaat atttaaggga ctttaaatc ttcgtaattt atatttacag	420
tataatcagg tatctttgt tccgagagga gtatttaatg atctagttc agttcagttac	480
ttaaatctac aaaggaatcg cctcactgtc cttgggagtg gtacctttgt tggtatggtt	540
gctcttcgga tacttgattt atcaaacaat aacattttga ggatatcaga atcaggctt	600
caacatcttgc aaaaccttgc ttgtttgtat ttaggaagta ataatttaac aaaagtacca	660
tcaaatgcct ttgaagtact taaaagtctt agaagacttt ctttgcctca taatcctatt	720
gaagcaatac agccctttgc atttaaaggga cttgccaatc tggaataacct cctcctgaaa	780
aattcaagaa ttaggaatgt tactaggat gggtttagtg gaattaataa tcttaaacat	840

ttgatcttaa gtcataatga tttagagaat ttaaattctg acacattcag tttgttaag	900
aatttaattt accttaagtt agatagaaaac agaataattha gcattgataa tgatacattt	960
gaaaatatgg gagcatctt gaagatcctt aatctgtcat ttaataatct tacagccttg	1020
catccaaggg tccttaagcc gttgtctca ttgattcatc ttcaggcaaa ttctaatcct	1080
tggaaatgta actgcaaact tttgggcctt cgagactggc tagcatctc agccattact	1140
ctaaacatct attgtcagaa tccccatcc atgcgtggca gaggattacg ttatattaac	1200
attacaaatt gtgttacatc ttcaataat gtatccagag cttgggctgt tgtaaaatct	1260
cctcatattc atcacaagac tactgcgcta atgatggcct ggcataaaagt aaccacaaat	1320
ggcagtcctc tggaaaatac tgagactgag aacattactt tctggaaacg aattcctact	1380
tcacctgctg gtagatttt tcaagagaat gccttggta atccattaga gactacagca	1440
gtgttacctg tgcaaataca acttactact tctgttacct tgaacttgga aaaaaacagt	1500
gctctaccga atgatgctgc ttcaatgtca gggaaaacat ctctaattt tacacaagaa	1560
gttgagaagt tgaatgaggc ttttgacatt ttgctagctt tttcatctt agcttgcgtt	1620
ttaatcattt tttgatcta caaagttgtt cagttaaac aaaaactaaa ggcacatcagaa	1680
aactcaaggg aaaatagact tgaatactac agctttatc agtcagcaag gtataatgta	1740
actgcctcaa tttgtAACAC ttccccaaat tctctagaaa gtcctggctt ggagcagatt	1800
cgacttcata aacaaattgt tcctgaaaat gaggcacagg tcattcttt tgaacattct	1860
gcttta	1866

<210> 23
 <211> 622
 <212> PRT
 <213> Homo sapiens

<400> 23

Met	Cys	Gly	Leu	Gln	Phe	Ser	Leu	Pro	Cys	Leu	Arg	Leu	Phe	Leu	Val
1															15

Val	Thr	Cys	Tyr	Leu	Leu	Leu	Leu	Leu	His	Lys	Glu	Ile	Leu	Gly	Cys
															20
															25
															30

Ser	Ser	Val	Cys	Gln	Leu	Cys	Thr	Gly	Arg	Gln	Ile	Asn	Cys	Arg	Asn
															35
															40

Leu	Gly	Leu	Ser	Ser	Ile	Pro	Lys	Asn	Phe	Pro	Glu	Ser	Thr	Val	Phe
															50
															55
															60

Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu Leu
65 70 75 80

Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn Ile
85 90 95

Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr Phe
100 105 110

Leu Phe Leu Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile Phe
115 120 125

Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln Val
130 135 140

Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln Tyr
145 150 155 160

Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr Phe
165 170 175

Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Ile
180 185 190

Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala Cys
195 200 205

Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala Phe
210 215 220

Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro Ile
225 230 235 240

Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu Tyr
245 250 255

Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly Phe
260 265 270

Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp Leu
275 280 285

Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile Tyr
290 295 300

Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr Phe
305 310 315 320

Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn Asn
325 330 335

Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu Ile
340 345 350

His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu Leu
355 360 365

Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile Tyr
370 375 380

Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile Asn
385 390 395 400

Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp Ala
405 410 415

Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met Met
420 425 430

Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr Glu
435 440 445

Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala Gly
450 455 460

Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr Ala
465 470 475 480

Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn Leu
485 490 495

Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly Lys
500 505 510

Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala Phe
515 520 525

Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe

530

535

540

Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu
545 550 555 560

Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala
565 570 575

Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu
580 585 590

Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro
595 600 605

Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
610 615 620

<210> 24

<211> 31

<212> PRT

<213> Homo sapiens

<400> 24

Met Cys Gly Leu Gln Phe Ser Leu Pro Cys Leu Arg Leu Phe Leu Val
1 5 10 15

Val Thr Cys Tyr Leu Leu Leu Leu His Lys Glu Ile Leu Gly
20 25 30

<210> 25

<211> 591

<212> PRT

<213> Homo sapiens

<400> 25

Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
1 5 10 15

Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
20 25 30

Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
35 40 45

Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn
50 55 60

Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr
65 70 75 80

Phe Leu Phe Leu Asn Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile
85 90 95

Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln
100 105 110

Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln
115 120 125

Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr
130 135 140

Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn
145 150 155 160

Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala
165 170 175

Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala
180 185 190

Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro
195 200 205

Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu
210 215 220

Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly
225 230 235 240

Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp
245 250 255

Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile
260 265 270

Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr
275 280 285

Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn

290

295

300

Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu
305 310 315 320

Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu
325 330 335

Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile
340 345 350

Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile
355 360 365

Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp
370 375 380

Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met
385 390 395 400

Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr
405 410 415

Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala
420 425 430

Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr
435 440 445

Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn
450 455 460

Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly
465 470 475 480

Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala
485 490 495

Phe Asp Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile
500 505 510

Phe Leu Ile Tyr Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser
515 520 525

Glu Asn Ser Arg Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser
530 535 540

Ala Arg Tyr Asn Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser
545 550 555 560

Leu Glu Ser Pro Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val
565 570 575

Pro Glu Asn Glu Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
580 585 590

<210> 26
<211> 498
<212> PRT
<213> Homo sapiens

<400> 26

Cys Ser Ser Val Cys Gln Leu Cys Thr Gly Arg Gln Ile Asn Cys Arg
1 5 10 15

Asn Leu Gly Leu Ser Ser Ile Pro Lys Asn Phe Pro Glu Ser Thr Val
20 25 30

Phe Leu Tyr Leu Thr Gly Asn Asn Ile Ser Tyr Ile Asn Glu Ser Glu
35 40 45

Leu Thr Gly Leu His Ser Leu Val Ala Leu Tyr Leu Asp Asn Ser Asn
50 55 60

Ile Leu Tyr Val Tyr Pro Lys Ala Phe Val Gln Leu Arg His Leu Tyr
65 70 75 80

Phe Leu Phe Leu Asn Asn Phe Ile Lys Arg Leu Asp Pro Gly Ile
85 90 95

Phe Lys Gly Leu Leu Asn Leu Arg Asn Leu Tyr Leu Gln Tyr Asn Gln
100 105 110

Val Ser Phe Val Pro Arg Gly Val Phe Asn Asp Leu Val Ser Val Gln
115 120 125

Tyr Leu Asn Leu Gln Arg Asn Arg Leu Thr Val Leu Gly Ser Gly Thr
130 135 140

Phe Val Gly Met Val Ala Leu Arg Ile Leu Asp Leu Ser Asn Asn Asn
145 150 155 160

Ile Leu Arg Ile Ser Glu Ser Gly Phe Gln His Leu Glu Asn Leu Ala
165 170 175

Cys Leu Tyr Leu Gly Ser Asn Asn Leu Thr Lys Val Pro Ser Asn Ala
180 185 190

Phe Glu Val Leu Lys Ser Leu Arg Arg Leu Ser Leu Ser His Asn Pro
195 200 205

Ile Glu Ala Ile Gln Pro Phe Ala Phe Lys Gly Leu Ala Asn Leu Glu
210 215 220

Tyr Leu Leu Leu Lys Asn Ser Arg Ile Arg Asn Val Thr Arg Asp Gly
225 230 235 240

Phe Ser Gly Ile Asn Asn Leu Lys His Leu Ile Leu Ser His Asn Asp
245 250 255

Leu Glu Asn Leu Asn Ser Asp Thr Phe Ser Leu Leu Lys Asn Leu Ile
260 265 270

Tyr Leu Lys Leu Asp Arg Asn Arg Ile Ile Ser Ile Asp Asn Asp Thr
275 280 285

Phe Glu Asn Met Gly Ala Ser Leu Lys Ile Leu Asn Leu Ser Phe Asn
290 295 300

Asn Leu Thr Ala Leu His Pro Arg Val Leu Lys Pro Leu Ser Ser Leu
305 310 315 320

Ile His Leu Gln Ala Asn Ser Asn Pro Trp Glu Cys Asn Cys Lys Leu
325 330 335

Leu Gly Leu Arg Asp Trp Leu Ala Ser Ser Ala Ile Thr Leu Asn Ile
340 345 350

Tyr Cys Gln Asn Pro Pro Ser Met Arg Gly Arg Ala Leu Arg Tyr Ile
355 360 365

Asn Ile Thr Asn Cys Val Thr Ser Ser Ile Asn Val Ser Arg Ala Trp
370 375 380

Ala Val Val Lys Ser Pro His Ile His His Lys Thr Thr Ala Leu Met
385 390 395 400

Met Ala Trp His Lys Val Thr Thr Asn Gly Ser Pro Leu Glu Asn Thr
405 410 415

Glu Thr Glu Asn Ile Thr Phe Trp Glu Arg Ile Pro Thr Ser Pro Ala
420 425 430

Gly Arg Phe Phe Gln Glu Asn Ala Phe Gly Asn Pro Leu Glu Thr Thr
435 440 445

Ala Val Leu Pro Val Gln Ile Gln Leu Thr Thr Ser Val Thr Leu Asn
450 455 460

Leu Glu Lys Asn Ser Ala Leu Pro Asn Asp Ala Ala Ser Met Ser Gly
465 470 475 480

Lys Thr Ser Leu Ile Cys Thr Gln Glu Val Glu Lys Leu Asn Glu Ala
485 490 495

Phe Asp

<210> 27
<211> 18
<212> PRT
<213> Homo sapiens

<400> 27

Ile Leu Leu Ala Phe Phe Ile Leu Ala Cys Val Leu Ile Ile Phe Leu
1 5 10 15

Ile Tyr

<210> 28
<211> 75
<212> PRT
<213> Homo sapiens

<400> 28

Lys Val Val Gln Phe Lys Gln Lys Leu Lys Ala Ser Glu Asn Ser Arg
1 5 10 15

Glu Asn Arg Leu Glu Tyr Tyr Ser Phe Tyr Gln Ser Ala Arg Tyr Asn
20 25 30

Val Thr Ala Ser Ile Cys Asn Thr Ser Pro Asn Ser Leu Glu Ser Pro
35 40 45

Gly Leu Glu Gln Ile Arg Leu His Lys Gln Ile Val Pro Glu Asn Glu
50 55 60

Ala Gln Val Ile Leu Phe Glu His Ser Ala Leu
65 70 75

<210> 29

<211> 1529

<212> PRT

<213> Homo sapiens

<400> 29

Met Arg Gly Val Gly Trp Gln Met Leu Ser Leu Ser Leu Gly Leu Val
1 5 10 15

Leu Ala Ile Leu Asn Lys Val Ala Pro Gln Ala Cys Pro Ala Gln Cys
20 25 30

Ser Cys Ser Gly Ser Thr Val Asp Cys His Gly Leu Ala Leu Arg Ser
35 40 45

Val Pro Arg Asn Ile Pro Arg Asn Thr Glu Arg Leu Asp Leu Asn Gly
50 55 60

Asn Asn Ile Thr Arg Ile Thr Lys Thr Asp Phe Ala Gly Leu Arg His
65 70 75 80

Leu Arg Val Leu Gln Leu Met Glu Asn Lys Ile Ser Thr Ile Glu Arg
85 90 95

Gly Ala Phe Gln Asp Leu Lys Glu Leu Glu Arg Leu Arg Leu Asn Arg
100 105 110

Asn His Leu Gln Leu Phe Pro Glu Leu Leu Phe Leu Gly Thr Ala Lys
115 120 125

Leu Tyr Arg Leu Asp Leu Ser Glu Asn Gln Ile Gln Ala Ile Pro Arg
130 135 140

Lys Ala Phe Arg Gly Ala Val Asp Ile Lys Asn Leu Gln Leu Asp Tyr
145 150 155 160

Asn Gln Ile Ser Cys Ile Glu Asp Gly Ala Phe Arg Ala Leu Arg Asp
165 170 175

Leu Glu Val Leu Thr Leu Asn Asn Asn Ile Thr Arg Leu Ser Val
180 185 190

Ala Ser Phe Asn His Met Pro Lys Leu Arg Thr Phe Arg Leu His Ser
195 200 205

Asn Asn Leu Tyr Cys Asp Cys His Leu Ala Trp Leu Ser Asp Trp Leu
210 215 220

Arg Gln Arg Pro Arg Val Gly Leu Tyr Thr Gln Cys Met Gly Pro Ser
225 230 235 240

His Leu Arg Gly His Asn Val Ala Glu Val Gln Lys Arg Glu Phe Val
245 250 255

Cys Ser Gly His Gln Ser Phe Met Ala Pro Ser Cys Ser Val Leu His
260 265 270

Cys Pro Ala Ala Cys Thr Cys Ser Asn Asn Ile Val Asp Cys Arg Gly
275 280 285

Lys Gly Leu Thr Glu Ile Pro Thr Asn Leu Pro Glu Thr Ile Thr Glu
290 295 300

Ile Arg Leu Glu Gln Asn Thr Ile Lys Val Ile Pro Pro Gly Ala Phe
305 310 315 320

Ser Pro Tyr Lys Lys Leu Arg Arg Ile Asp Leu Ser Asn Asn Gln Ile
325 330 335

Ser Glu Leu Ala Pro Asp Ala Phe Gln Gly Leu Arg Ser Leu Asn Ser
340 345 350

Leu Val Leu Tyr Gly Asn Lys Ile Thr Glu Leu Pro Lys Ser Leu Phe
355 360 365

Glu Gly Leu Phe Ser Leu Gln Leu Leu Leu Asn Ala Asn Lys Ile
370 375 380

Asn Cys Leu Arg Val Asp Ala Phe Gln Asp Leu His Asn Leu Asn Leu
385 390 395 400

Leu Ser Leu Tyr Asp Asn Lys Leu Gln Thr Ile Ala Lys Gly Thr Phe
405 410 415

Ser Pro Leu Arg Ala Ile Gln Thr Met His Leu Ala Gln Asn Pro Phe
420 425 430

Ile Cys Asp Cys His Leu Lys Trp Leu Ala Asp Tyr Leu His Thr Asn
435 440 445

Pro Ile Glu Thr Ser Gly Ala Arg Cys Thr Ser Pro Arg Arg Leu Ala
450 455 460

Asn Lys Arg Ile Gly Gln Ile Lys Ser Lys Lys Phe Arg Cys Ser Ala
465 470 475 480

Lys Glu Gln Tyr Phe Ile Pro Gly Thr Glu Asp Tyr Arg Ser Lys Leu
485 490 495

Ser Gly Asp Cys Phe Ala Asp Leu Ala Cys Pro Glu Lys Cys Arg Cys
500 505 510

Glu Gly Thr Thr Val Asp Cys Ser Asn Gln Lys Leu Asn Lys Ile Pro
515 520 525

Glu His Ile Pro Gln Tyr Thr Ala Glu Leu Arg Leu Asn Asn Asn Glu
530 535 540

Phe Thr Val Leu Glu Ala Thr Gly Ile Phe Lys Lys Leu Pro Gln Leu
545 550 555 560

Arg Lys Ile Asn Phe Ser Asn Asn Lys Ile Thr Asp Ile Glu Glu Gly
565 570 575

Ala Phe Glu Gly Ala Ser Gly Val Asn Glu Ile Leu Leu Thr Ser Asn
580 585 590

Arg Leu Glu Asn Val Gln His Lys Met Phe Lys Gly Leu Glu Ser Leu
595 600 605

Lys Thr Leu Met Leu Arg Ser Asn Arg Ile Thr Cys Val Gly Asn Asp
610 615 620

Ser Phe Ile Gly Leu Ser Ser Val Arg Leu Leu Ser Leu Tyr Asp Asn
625 630 635 640

Gln Ile Thr Thr Val Ala Pro Gly Ala Phe Asp Thr Leu His Ser Leu
645 650 655

Ser Thr Leu Asn Leu Leu Ala Asn Pro Phe Asn Cys Asn Cys Tyr Leu
660 665 670

Ala Trp Leu Gly Glu Trp Leu Arg Lys Lys Arg Ile Val Thr Gly Asn
675 680 685

Pro Arg Cys Gln Lys Pro Tyr Phe Leu Lys Glu Ile Pro Ile Gln Asp
690 695 700

Val Ala Ile Gln Asp Phe Thr Cys Asp Asp Gly Asn Asp Asp Asn Ser
705 710 715 720

Cys Ser Pro Leu Ser Arg Cys Pro Thr Glu Cys Thr Cys Leu Asp Thr
725 730 735

Val Val Arg Cys Ser Asn Lys Gly Leu Lys Val Leu Pro Lys Gly Ile
740 745 750

Pro Arg Asp Val Thr Glu Leu Tyr Leu Asp Gly Asn Gln Phe Thr Leu
755 760 765

Val Pro Lys Glu Leu Ser Asn Tyr Lys His Leu Thr Leu Ile Asp Leu
770 775 780

Ser Asn Asn Arg Ile Ser Thr Leu Ser Asn Gln Ser Phe Ser Asn Met
785 790 795 800

Thr Gln Leu Leu Thr Leu Ile Leu Ser Tyr Asn Arg Leu Arg Cys Ile
805 810 815

Pro Pro Arg Thr Phe Asp Gly Leu Lys Ser Leu Arg Leu Leu Ser Leu
820 825 830

His Gly Asn Asp Ile Ser Val Val Pro Glu Gly Ala Phe Asn Asp Leu
835 840 845

Ser Ala Leu Ser His Leu Ala Ile Gly Ala Asn Pro Leu Tyr Cys Asp

850

855

860

Cys Asn Met Gln Trp Leu Ser Asp Trp Val Lys Ser Glu Tyr Lys Glu
865 870 875 880

Pro Gly Ile Ala Arg Cys Ala Gly Pro Gly Glu Met Ala Asp Lys Leu
885 890 895

Leu Leu Thr Thr Pro Ser Lys Lys Phe Thr Cys Gln Gly Pro Val Asp
900 905 910

Val Asn Ile Leu Ala Lys Cys Asn Pro Cys Leu Ser Asn Pro Cys Lys
915 920 925

Asn Asp Gly Thr Cys Asn Ser Asp Pro Val Asp Phe Tyr Arg Cys Thr
930 935 940

Cys Pro Tyr Gly Phe Lys Gly Gln Asp Cys Asp Val Pro Ile His Ala
945 950 955 960

Cys Ile Ser Asn Pro Cys Lys His Gly Gly Thr Cys His Leu Lys Glu
965 970 975

Gly Glu Glu Asp Gly Phe Trp Cys Ile Cys Ala Asp Gly Phe Glu Gly
980 985 990

Glu Asn Cys Glu Val Asn Val Asp Asp Cys Glu Asp Asn Asp Cys Glu
995 1000 1005

Asn Asn Ser Thr Cys Val Asp Gly Ile Asn Asn Tyr Thr Cys Leu
1010 1015 1020

Cys Pro Pro Glu Tyr Thr Gly Glu Leu Cys Glu Glu Lys Leu Asp
1025 1030 1035

Phe Cys Ala Gln Asp Leu Asn Pro Cys Gln His Asp Ser Lys Cys
1040 1045 1050

Ile Leu Thr Pro Lys Gly Phe Lys Cys Asp Cys Thr Pro Gly Tyr
1055 1060 1065

Val Gly Glu His Cys Asp Ile Asp Phe Asp Asp Cys Gln Asp Asn
1070 1075 1080

Lys Cys Lys Asn Gly Ala His Cys Thr Asp Ala Val Asn Gly Tyr
1085 1090 1095

Thr Cys Ile Cys Pro Glu Gly Tyr Ser Gly Leu Phe Cys Glu Phe
1100 1105 1110

Ser Pro Pro Met Val Leu Pro Arg Thr Ser Pro Cys Asp Asn Phe
1115 1120 1125

Asp Cys Gln Asn Gly Ala Gln Cys Ile Val Arg Ile Asn Glu Pro
1130 1135 1140

Ile Cys Gln Cys Leu Pro Gly Tyr Gln Gly Glu Lys Cys Glu Lys
1145 1150 1155

Leu Val Ser Val Asn Phe Ile Asn Lys Glu Ser Tyr Leu Gln Ile
1160 1165 1170

Pro Ser Ala Lys Val Arg Pro Gln Thr Asn Ile Thr Leu Gln Ile
1175 1180 1185

Ala Thr Asp Glu Asp Ser Gly Ile Leu Leu Tyr Lys Gly Asp Lys
1190 1195 1200

Asp His Ile Ala Val Glu Leu Tyr Arg Gly Arg Val Arg Ala Ser
1205 1210 1215

Tyr Asp Thr Gly Ser His Pro Ala Ser Ala Ile Tyr Ser Val Glu
1220 1225 1230

Thr Ile Asn Asp Gly Asn Phe His Ile Val Glu Leu Leu Ala Leu
1235 1240 1245

Asp Gln Ser Leu Ser Leu Ser Val Asp Gly Gly Asn Pro Lys Ile
1250 1255 1260

Ile Thr Asn Leu Ser Lys Gln Ser Thr Leu Asn Phe Asp Ser Pro
1265 1270 1275

Leu Tyr Val Gly Gly Met Pro Gly Lys Ser Asn Val Ala Ser Leu
1280 1285 1290

Arg Gln Ala Pro Gly Gln Asn Gly Thr Ser Phe His Gly Cys Ile
1295 1300 1305

Arg Asn Leu Tyr Ile Asn Ser Glu Leu Gln Asp Phe Gln Lys Val
1310 1315 1320

Pro Met Gln Thr Gly Ile Leu Pro Gly Cys Glu Pro Cys His Lys
1325 1330 1335

Lys Val Cys Ala His Gly Thr Cys Gln Pro Ser Ser Gln Ala Gly
1340 1345 1350

Phe Thr Cys Glu Cys Gln Glu Gly Trp Met Gly Pro Leu Cys Asp
1355 1360 1365

Gln Arg Thr Asn Asp Pro Cys Leu Gly Asn Lys Cys Val His Gly
1370 1375 1380

Thr Cys Leu Pro Ile Asn Ala Phe Ser Tyr Ser Cys Lys Cys Leu
1385 1390 1395

Glu Gly His Gly Gly Val Leu Cys Asp Glu Glu Glu Asp Leu Phe
1400 1405 1410

Asn Pro Cys Gln Ala Ile Lys Cys Lys His Gly Lys Cys Arg Leu
1415 1420 1425

Ser Gly Leu Gly Gln Pro Tyr Cys Glu Cys Ser Ser Gly Tyr Thr
1430 1435 1440

Gly Asp Ser Cys Asp Arg Glu Ile Ser Cys Arg Gly Glu Arg Ile
1445 1450 1455

Arg Asp Tyr Tyr Gln Lys Gln Gln Gly Tyr Ala Ala Cys Gln Thr
1460 1465 1470

Thr Lys Lys Val Ser Arg Leu Glu Cys Arg Gly Gly Cys Ala Gly
1475 1480 1485

Gly Gln Cys Cys Gly Pro Leu Arg Ser Lys Arg Arg Lys Tyr Ser
1490 1495 1500

Phe Glu Cys Thr Asp Gly Ser Ser Phe Val Asp Glu Val Glu Lys
1505 1510 1515

Val Val Lys Cys Gly Cys Thr Arg Cys Val Ser
1520 1525

<210>	30					
<211>	4900					
<212>	DNA					
<213>	Homo sapiens					
<400>	30					
cagagcaggg	tggagagggc	ggtggagggc	gtgtgcctga	gtgggctcta	ctgccttgtt	60
ccatattatt	tttgtcacat	tttccctggc	actctgggtt	gctagccccg	ccgggcactg	120
ggcctcagac	actgcgcggt	tccctcgag	cagcaagcta	aagaaagccc	ccagtgccgg	180
cgaggaagga	ggcggcgggg	aaagatgcgc	ggcggtggct	ggcagatgct	gtccctgtcg	240
ctggggttag	tgctggcgat	cctgaacaag	gtggcaccgc	aggcgtgccc	ggcgcagtc	300
tcttgctcg	gcagcacagt	ggactgtcac	gggctggcgc	tgcgcagcgt	gcccaggaat	360
atccccgca	acaccgagag	actggattta	aatggaaata	acatcacaag	aattacgaag	420
acagatttg	ctggtcttag	acatctaaga	gttcttcagc	ttatggagaa	taagattagc	480
accattgaaa	gaggagcatt	ccaggatctt	aaagaactag	agagactgcg	tttaaacaga	540
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3510

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<213> Homo sapiens

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1530

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<211> 510
<212> PRT
<213> Homo sapiens

<400> 33

Met Pro Leu Ser Leu Gly Ala Glu Met Trp Gly Pro Glu Ala Trp Leu
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Leu Leu Leu Leu Leu Ala Ser Phe Thr Gly Arg Cys Pro Ala Gly
20 25 30

Glu Leu Glu Thr Ser Asp Val Val Thr Val Val Leu Gly Gln Asp Ala
35 40 45

Lys Leu Pro Cys Phe Tyr Arg Gly Asp Ser Gly Glu Gln Val Gly Gln
50 55 60

Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu Ala
65 70 75 80

Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu Gly
85 90 95

Arg Val Glu Gln Pro Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser Val
100 105 110

Leu Leu Arg Asn Ala Val Gln Ala Asp Glu Gly Glu Tyr Glu Cys Arg
115 120 125

Val Ser Thr Phe Pro Ala Gly Ser Phe Gln Ala Arg Leu Arg Leu Arg
130 135 140

Val Leu Val Pro Pro Leu Pro Ser Leu Asn Pro Gly Pro Ala Leu Glu
145 150 155 160

Glu Gly Gln Gly Leu Thr Leu Ala Ala Ser Cys Thr Ala Glu Gly Ser
165 170 175

Pro Ala Pro Ser Val Thr Trp Asp Thr Glu Val Lys Gly Thr Thr Ser
180 185 190

Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala Val Thr Ser Glu Phe

195

200

205

His Leu Val Pro Ser Arg Ser Met Asn Gly Gln Pro Leu Thr Cys Val
210 215 220

Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg Ile Thr His Ile Leu
225 230 235 240

His Val Ser Phe Leu Ala Glu Ala Ser Val Arg Gly Leu Glu Asp Gln
245 250 255

Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met Leu Lys Cys Leu Ser
260 265 270

Glu Gly Gln Pro Pro Ser Tyr Asn Trp Thr Arg Leu Asp Gly Pro
275 280 285

Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr Leu Gly Phe Pro Pro
290 295 300

Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys His Val Ser Asn Glu
305 310 315 320

Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp Val Leu Asp Pro Gln
325 330 335

Glu Asp Ser Gly Lys Gln Val Asp Leu Val Ser Ala Ser Val Val Val
340 345 350

Val Gly Val Ile Ala Ala Leu Leu Phe Cys Leu Leu Val Val Val Val
355 360 365

Val Leu Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr Gln
370 375 380

Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg Glu Asn Ser Ile Arg Arg
385 390 395 400

Leu His Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser Val
405 410 415

Gly Leu Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser Ser
420 425 430

Cys Ser Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu
435 440 445

Thr Thr Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly
450 455 460

Ser Gly Arg Ala Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln
465 470 475 480

Ala Met Asn His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro
485 490 495

Thr Gly Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
500 505 510

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<211> 31
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<213> Homo sapiens

<400> 34

Met Pro Leu Ser Leu Gly Ala Glu Met Trp Gly Pro Glu Ala Trp Leu
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Leu Leu Leu Leu Leu Leu Ala Ser Phe Thr Gly Arg Cys Pro Ala
20 25 30

<210> 35
<211> 479
<212> PRT
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<400> 35

Gly Glu Leu Glu Thr Ser Asp Val Val Thr Val Val Leu Gly Gln Asp
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Ala Lys Leu Pro Cys Phe Tyr Arg Gly Asp Ser Gly Glu Gln Val Gly
20 25 30

Gln Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu
35 40 45

Ala Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu
50 55 60

Gly Arg Val Glu Gln Pro Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser

65

70

75

80

Val Leu Leu Arg Asn Ala Val Gln Ala Asp Glu Gly Glu Tyr Glu Cys
85 90 95

Arg Val Ser Thr Phe Pro Ala Gly Ser Phe Gln Ala Arg Leu Arg Leu
100 105 110

Arg Val Leu Val Pro Pro Leu Pro Ser Leu Asn Pro Gly Pro Ala Leu
115 120 125

Glu Glu Gly Gln Gly Leu Thr Leu Ala Ala Ser Cys Thr Ala Glu Gly
130 135 140

Ser Pro Ala Pro Ser Val Thr Trp Asp Thr Glu Val Lys Gly Thr Thr
145 150 155 160

Ser Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala Val Thr Ser Glu
165 170 175

Phe His Leu Val Pro Ser Arg Ser Met Asn Gly Gln Pro Leu Thr Cys
180 185 190

Val Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg Ile Thr His Ile
195 200 205

Leu His Val Ser Phe Leu Ala Glu Ala Ser Val Arg Gly Leu Glu Asp
210 215 220

Gln Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met Leu Lys Cys Leu
225 230 235 240

Ser Glu Gly Gln Pro Pro Ser Tyr Asn Trp Thr Arg Leu Asp Gly
245 250 255

Pro Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr Leu Gly Phe Pro
260 265 270

Pro Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys His Val Ser Asn
275 280 285

Glu Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp Val Leu Asp Pro
290 295 300

Gln Glu Asp Ser Gly Lys Gln Val Asp Leu Val Ser Ala Ser Val Val
305 310 315 320

Val Val Gly Val Ile Ala Ala Leu Leu Phe Cys Leu Leu Val Val Val
325 330 335

Val Val Leu Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr
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Gln Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg Glu Asn Ser Ile Arg
355 360 365

Arg Leu His Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser
370 375 380

Val Gly Leu Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser
385 390 395 400

Ser Cys Ser Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr
405 410 415

Leu Thr Thr Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro
420 425 430

Gly Ser Gly Arg Ala Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys
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Pro Thr Gly Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
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<400> 36

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20 25 30

Gln Val Ala Trp Ala Arg Val Asp Ala Gly Glu Gly Ala Gln Glu Leu
35 40 45

Ala Leu Leu His Ser Lys Tyr Gly Leu His Val Ser Pro Ala Tyr Glu
50 55 60

Gly Arg Val Glu Gln Pro Pro Pro Arg Asn Pro Leu Asp Gly Ser
65 70 75 80

Val Leu Leu Arg Asn Ala Val Gln Ala Asp Glu Gly Glu Tyr Glu Cys
85 90 95

Arg Val Ser Thr Phe Pro Ala Gly Ser Phe Gln Ala Arg Leu Arg Leu
100 105 110

Arg Val Leu Val Pro Pro Leu Pro Ser Leu Asn Pro Gly Pro Ala Leu
115 120 125

Glu Glu Gly Gln Gly Leu Thr Leu Ala Ala Ser Cys Thr Ala Glu Gly
130 135 140

Ser Pro Ala Pro Ser Val Thr Trp Asp Thr Glu Val Lys Gly Thr Thr
145 150 155 160

Ser Ser Arg Ser Phe Lys His Ser Arg Ser Ala Ala Val Thr Ser Glu
165 170 175

Phe His Leu Val Pro Ser Arg Ser Met Asn Gly Gln Pro Leu Thr Cys
180 185 190

Val Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg Ile Thr His Ile
195 200 205

Leu His Val Ser Phe Leu Ala Glu Ala Ser Val Arg Gly Leu Glu Asp
210 215 220

Gln Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met Leu Lys Cys Leu
225 230 235 240

Ser Glu Gly Gln Pro Pro Pro Ser Tyr Asn Trp Thr Arg Leu Asp Gly
245 250 255

Pro Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr Leu Gly Phe Pro
260 265 270

Pro Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys His Val Ser Asn
275 280 285

Glu Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp Val Leu Asp Pro
290 295 300

Gln Glu Asp Ser Gly Lys Gln Val Asp Leu
305 310

<210> 37
<211> 25
<212> PRT
<213> Homo sapiens

<400> 37

Val Ser Ala Ser Val Val Val Gly Val Ile Ala Ala Leu Leu Phe
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Cys Leu Leu Val Val Val Val Leu
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<210> 38
<211> 140
<212> PRT
<213> Homo sapiens

<400> 38

Met Ser Arg Tyr His Arg Arg Lys Ala Gln Gln Met Thr Gln Lys Tyr
1 5 10 15

Glu Glu Glu Leu Thr Leu Thr Arg Glu Asn Ser Ile Arg Arg Leu His
20 25 30

Ser His His Thr Asp Pro Arg Ser Gln Pro Glu Glu Ser Val Gly Leu
35 40 45

Arg Ala Glu Gly His Pro Asp Ser Leu Lys Asp Asn Ser Ser Cys Ser
50 55 60

Val Met Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu Thr Thr
65 70 75 80

Val Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly Ser Gly
85 90 95

Arg Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln Ala Met
100 105 110

Asn His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro Thr Gly
115 120 125

Asn Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
130 135 140

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<400> 39
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<213> Homo sapiens

<400> 40
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<212> DNA
<213> Homo sapiens

<400> 41
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<212> DNA
<213> Homo sapiens

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<210> 43
<211> 299
<212> PRT
<213> Homo sapiens

<400> 43

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Val Thr Ser Glu Phe His Leu Val Pro Ser Arg Ser Met Asn Gly Gln
20 25 30

Pro Leu Thr Cys Val Val Ser His Pro Gly Leu Leu Gln Asp Gln Arg
35 40 45

Ile Thr His Ile Leu His Val Ser Phe Leu Ala Glu Ala Ser Val Arg
50 55 60

Gly Leu Glu Asp Gln Asn Leu Trp His Ile Gly Arg Glu Gly Ala Met
65 70 75 80

Leu Lys Cys Leu Ser Glu Gly Gln Pro Pro Pro Ser Tyr Asn Trp Thr
85 90 95

Arg Leu Asp Gly Pro Leu Pro Ser Gly Val Arg Val Asp Gly Asp Thr
100 105 110

Leu Gly Phe Pro Pro Leu Thr Thr Glu His Ser Gly Ile Tyr Val Cys
115 120 125

His Val Ser Asn Glu Phe Ser Ser Arg Asp Ser Gln Val Thr Val Asp
130 135 140

Val Leu Ala Asp Pro Gln Glu Asp Ser Gly Lys Gln Val Asp Leu Val
145 150 155 160

Ser Ala Ser Val Val Val Val Gly Val Ile Ala Ala Leu Leu Phe Cys
165 170 175

Leu Leu Val Val Val Val Leu Met Ser Arg Tyr His Arg Arg Lys
180 185 190

Ala Gln Gln Met Thr Gln Lys Tyr Glu Glu Glu Leu Thr Leu Thr Arg
195 200 205

Glu Asn Ser Ile Arg Arg Leu His Ser His His Thr Asp Pro Arg Ser
210 215 220

Gln Ser Glu Glu Pro Glu Gly Arg Ser Tyr Ser Thr Leu Thr Thr Val
225 230 235 240

Arg Glu Ile Glu Thr Gln Thr Glu Leu Leu Ser Pro Gly Ser Gly Arg
245 250 255

Ala Glu Glu Glu Glu Asp Gln Asp Glu Gly Ile Lys Gln Ala Met Asn
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His Phe Val Gln Glu Asn Gly Thr Leu Arg Ala Lys Pro Thr Gly Asn
275 280 285

Gly Ile Tyr Ile Asn Gly Arg Gly His Leu Val
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 <211> 627
 <212> DNA
 <213> Homo sapiens

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<210> 53
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 53

Met Met Gln Glu Gln Gln Pro Gln Ser Thr Glu Lys Arg Gly Trp Leu
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Ser Leu Arg Leu Trp Ser Val Ala Gly Ile Ser Ile Ala Leu Leu Ser
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Ala Cys Phe Ile Val Ser Cys Val Val Thr Tyr His Phe Thr Tyr Gly
 35 40 45

Glu Thr Gly Lys Arg Leu Ser Glu Leu His Ser Tyr His Ser Ser Leu
 50 55 60

Thr Cys Phe Ser Glu Gly Thr Lys Val Pro Ala Trp Gly Cys Cys Pro
 65 70 75 80

Ala Ser Trp Lys Ser Phe Gly Ser Ser Cys Tyr Phe Ile Ser Ser Glu

85

90

95

Glu Lys Val Trp Ser Lys Ser Glu Gln Asn Cys Val Glu Met Gly Ala
100 105 110

His Leu Val Val Phe Asn Thr Glu Ala Glu Gln Asn Phe Ile Val Gln
115 120 125

Gln Leu Asn Glu Ser Phe Ser Tyr Phe Leu Gly Leu Ser Asp Pro Gln
130 135 140

Gly Asn Asn Asn Trp Gln Trp Ile Asp Lys Thr Pro Tyr Glu Lys Asn
145 150 155 160

Val Arg Phe Trp His Leu Gly Glu Pro Asn His Ser Ala Glu Gln Cys
165 170 175

Ala Ser Ile Val Phe Trp Lys Pro Thr Gly Trp Gly Trp Asn Asp Val
180 185 190

Ile Cys Glu Thr Arg Arg Asn Ser Ile Cys Glu Met Asn Lys Ile Tyr
195 200 205

Leu

<210> 54
<211> 48
<212> PRT
<213> Homo sapiens

<400> 54

Met Met Gln Glu Gln Gln Pro Gln Ser Thr Glu Lys Arg Gly Trp Leu
1 5 10 15

Ser Leu Arg Leu Trp Ser Val Ala Gly Ile Ser Ile Ala Leu Leu Ser
20 25 30

Ala Cys Phe Ile Val Ser Cys Val Val Thr Tyr His Phe Thr Tyr Gly
35 40 45

<210> 55
<211> 161
<212> PRT
<213> Homo sapiens

<400> 55

Glu Thr Gly Lys Arg Leu Ser Glu Leu His Ser Tyr His Ser Ser Leu
1 5 10 15

Thr Cys Phe Ser Glu Gly Thr Lys Val Pro Ala Trp Gly Cys Cys Pro
20 25 30

Ala Ser Trp Lys Ser Phe Gly Ser Ser Cys Tyr Phe Ile Ser Ser Glu
35 40 45

Glu Lys Val Trp Ser Lys Ser Glu Gln Asn Cys Val Glu Met Gly Ala
50 55 60

His Leu Val Val Phe Asn Thr Glu Ala Glu Gln Asn Phe Ile Val Gln
65 . 70 75 80

Gln Leu Asn Glu Ser Phe Ser Tyr Phe Leu Gly Leu Ser Asp Pro Gln
85 90 95

Gly Asn Asn Asn Trp Gln Trp Ile Asp Lys Thr Pro Tyr Glu Lys Asn
100 105 110

Val Arg Phe Trp His Leu Gly Glu Pro Asn His Ser Ala Glu Gln Cys
115 120 125

Ala Ser Ile Val Phe Trp Lys Pro Thr Gly Trp Gly Trp Asn Asp Val
130 135 140

Ile Cys Glu Thr Arg Arg Asn Ser Ile Cys Glu Met Asn Lys Ile Tyr
145 150 155 160

Leu

<210> 56

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<212> DNA

<213> Homo sapiens

<400> 56

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<210> 57

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<210> 60
<211> 209
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<400> 60

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Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys
20 25 30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro
35 40 45

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys
50 55 60

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro
65 70 75 80

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
85 90 95

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
100 105 110

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln

115

120

125

Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Gln
130 135 140

Gly Asn Gly Lys Trp Gln Trp Ile Asp Asp Thr Pro Phe Ser Gln Asn
145 150 155 160

Val Arg Phe Trp His Pro His Glu Pro Asn Leu Pro Glu Glu Arg Cys
165 170 175

Val Ser Ile Val Tyr Trp Asn Pro Ser Lys Trp Gly Trp Asn Asp Val
180 185 190

Phe Cys Asp Ser Lys His Asn Ser Ile Cys Glu Met Lys Lys Ile Tyr
195 200 205

Leu

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<211> 821
<212> DNA
<213> Mus sp.

<220>
<221> misc_feature
<222> (788)..(788)
<223> unsure

<400> 61
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 <211> 534
 <212> DNA
 <213> Mus sp.

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<210> 63
 <211> 178
 <212> PRT
 <213> Mus sp.

<400> 63

Met Val Gln Glu Arg Gln Ser Gln Gly Lys Gly Val Cys Trp Thr Leu			
1	5	10	15

Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys		
20	25	30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro		
35	40	45

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys		
50	55	60

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro			
65	70	75	80

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
85 90 95

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
100 105 110

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln
115 120 125

Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Lys
130 135 140

Val Met Ala Asn Gly Asn Gly Ser Met Ile Leu Leu Ser Val Lys Met
145 150 155 160

Ser Gly Ser Gly Thr Pro Met Asn Pro Ile Phe Gln Lys Ser Gly Val
165 170 175

Phe Gln

<210> 64
<211> 48
<212> PRT
<213> Mus sp.

<400> 64

Met Val Gln Glu Arg Gln Ser Gln Gly Lys Gly Val Cys Trp Thr Leu
1 5 10 15

Arg Leu Trp Ser Ala Ala Val Ile Ser Met Leu Leu Leu Ser Thr Cys
20 25 30

Phe Ile Ala Ser Cys Val Val Thr Tyr Gln Phe Ile Met Asp Gln Pro
35 40 45

<210> 65
<211> 130
<212> PRT
<213> Mus sp.

<400> 65

Ser Arg Arg Leu Tyr Glu Leu His Thr Tyr His Ser Ser Leu Thr Cys
1 5 10 15

Phe Ser Glu Gly Thr Met Val Ser Glu Lys Met Trp Gly Cys Cys Pro
20 25 30

Asn His Trp Lys Ser Phe Gly Ser Ser Cys Tyr Leu Ile Ser Thr Lys
35 40 45

Glu Asn Phe Trp Ser Thr Ser Glu Gln Asn Cys Val Gln Met Gly Ala
50 55 60

His Leu Val Val Ile Asn Thr Glu Ala Glu Gln Asn Phe Ile Thr Gln
65 70 75 80

Gln Leu Asn Glu Ser Leu Ser Tyr Phe Leu Gly Leu Ser Asp Pro Lys
85 90 95

Val Met Ala Asn Gly Asn Gly Ser Met Ile Leu Leu Ser Val Lys Met
100 105 110

Ser Gly Ser Gly Thr Pro Met Asn Pro Ile Phe Gln Lys Ser Gly Val
115 120 125

Phe Gln
130

<210> 66
<211> 0
<212> DNA
<213> Mus sp.

<400> 66
000 3

<210> 67
<211> 0
<212> DNA
<213> Mus sp.

<400> 67
000 3

<210> 68
<211> 0
<212> DNA
<213> Mus sp.

<400> 68
000 3

<210> 69		
<211> 0		
<212> DNA		
<213> Mus sp.		
 <400> 69		
000		3
 <210> 70		
<211> 0		
<212> DNA		
<213> Mus sp.		
 <400> 70		
000		3
 <210> 71		
<211> 1252		
<212> DNA		
<213> Mus sp.		
 <400> 71		
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caagtgtgtg tggaagttga ttctgaactc tggcctctt gacagaagcc aggtccctga	120	
gtcgtatttt ggagacagat gcaagaaacc cctgacccctc tgaacataca cctcaacaat	180	
ggtgcaggaa agacaatccc aagggaaaggg agtctgctgg accctgagac tctggtcagc	240	
tgctgtgatt tccatgttac tcttgagtac ctgtttcatt gcgagctgtg tggtgactta	300	
ccaaattttt atggaccaggc ccagtagaaag actatatgaa ctacacacat accattccag	360	
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ggatccacaa ggtaatggca aatggcaatg gatcgatgtat actcctttca gtcaaaatgt	660	
caggttctgg caccccatg aacccaatct tccagaagag cggtgtgttt caatagttt	720	
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atgtgaaatg aagaagattt acctatgagt gcctgttatt catataatc tttaaagtcc	840	
agacctacca agaagccata acttcttggc ctgtacatct gacagaggcc gttctttcc	900	
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catccatctc tgccctcagg tttctgcccc agggtcttgc cctggttct ttctatgaac	1200
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<210> 72
 <211> 627
 <212> DNA
 <213> Mus sp.

<400> 72	
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gctgctgtga tttccatgtt actcttgagt acctgtttca ttgcgagctg tgtggtgact	120
taccaattta ttatggacca gcccagttaga agactatatg aacttcacac ataccattcc	180
agtctcacct gttcagtga agggactatg gtgtcagaaa aaatgtgggg atgctgccc	240
aatcaactgga agtcatttgg ctccagctgc tacctcattt ctaccaagga gaacttctgg	300
agcaccagtg agcagaactg tttcagatg gggctcatc tggtggtgat caataactgaa	360
gcggagcaga atttcatcac ccagcagctg aatgagtcac tttcttactt cctgggtctt	420
tcggatccac aaggtaatgg caaatggcaa tggatcgatg atactccttt cagtcaaaat	480
gtcaggttct ggcacccca tgaacccaaat cttccagaag agcgggtgtt ttcaatagtt	540
tactggaatc cttcgaaatg gggctggaat gatgtttct gtgatagtaa acacaattca	600
atatgtaaa tgaagaagat ttaccta	627

<210> 73
 <211> 586
 <212> PRT
 <213> Mus sp.

<400> 73

Met Glu Thr Val Ala Leu Gly Leu Asn Gly Leu Ala Arg Gly Gly Leu			
1	5	10	15

Asn Ser Glu Arg Gly Leu Asn Gly Leu Tyr Leu Tyr Ser Gly Leu Tyr		
20	25	30

Val Ala Leu Cys Tyr Ser Thr Arg Pro Thr His Arg Leu Glu Ala Arg		
35	40	45

Gly Leu Glu Thr Arg Pro Ser Glu Arg Ala Leu Ala Ala Leu Ala Val		
50	55	60

Ala Leu Ile Leu Glu Ser Glu Arg Met Glu Thr Leu Glu Leu Glu Leu
65 70 75 80

Glu Ser Glu Arg Thr His Arg Cys Tyr Ser Pro His Glu Ile Leu Glu
85 90 95

Ala Leu Ala Ser Glu Arg Cys Tyr Ser Val Ala Leu Val Ala Leu Thr
100 105 110

His Arg Thr Tyr Arg Gly Leu Asn Pro His Glu Ile Leu Glu Met Glu
115 120 125

Thr Ala Ser Pro Gly Leu Asn Pro Arg Ser Glu Arg Ala Arg Gly Ala
130 135 140

Arg Gly Leu Glu Thr Tyr Arg Gly Leu Leu Glu His Ile Ser Thr His
145 150 155 160

Arg Thr Tyr Arg His Ile Ser Ser Glu Arg Ser Glu Arg Leu Glu Thr
165 170 175

His Arg Cys Tyr Ser Pro His Glu Ser Glu Arg Gly Leu Gly Leu Tyr
180 185 190

Thr His Arg Met Glu Thr Val Ala Leu Ser Glu Arg Gly Leu Leu Tyr
195 200 205

Ser Met Glu Thr Thr Arg Pro Gly Leu Tyr Cys Tyr Ser Cys Tyr Ser
210 215 220

Pro Arg Ala Ser Asn His Ile Ser Thr Arg Pro Leu Tyr Ser Ser Glu
225 230 235 240

Arg Pro His Glu Gly Leu Tyr Ser Glu Arg Ser Glu Arg Cys Tyr Ser
245 250 255

Thr Tyr Arg Leu Glu Ile Leu Glu Ser Glu Arg Thr His Arg Leu Tyr
260 265 270

Ser Gly Leu Ala Ser Asn Pro His Glu Thr Arg Pro Ser Glu Arg Thr
275 280 285

His Arg Ser Glu Arg Gly Leu Gly Leu Asn Ala Ser Asn Cys Tyr Ser

290

295

300

Val Ala Leu Gly Leu Asn Met Glu Thr Gly Leu Tyr Ala Leu Ala His
305 310 315 320

Ile Ser Leu Glu Val Ala Leu Val Ala Leu Ile Leu Glu Ala Ser Asn
325 330 335

Thr His Arg Gly Leu Ala Leu Ala Gly Leu Gly Leu Asn Ala Ser Asn
340 345 350

Pro His Glu Ile Leu Glu Thr His Arg Gly Leu Asn Gly Leu Asn Leu
355 360 365

Glu Ala Ser Asn Gly Leu Ser Glu Arg Leu Glu Ser Glu Arg Thr Tyr
370 375 380

Arg Pro His Glu Leu Glu Gly Leu Tyr Leu Glu Ser Glu Arg Ala Ser
385 390 395 400

Pro Pro Arg Gly Leu Asn Gly Leu Tyr Ala Ser Asn Gly Leu Tyr Leu
405 410 415

Tyr Ser Thr Arg Pro Gly Leu Asn Thr Arg Pro Ile Leu Glu Ala Ser
420 425 430

Pro Ala Ser Pro Thr His Arg Pro Arg Pro His Glu Ser Glu Arg Gly
435 440 445

Leu Asn Ala Ser Asn Val Ala Leu Ala Arg Gly Pro His Glu Thr Arg
450 455 460

Pro His Ile Ser Pro Arg His Ile Ser Gly Leu Pro Arg Ala Ser Asn
465 470 475 480

Leu Glu Pro Arg Gly Leu Gly Leu Ala Arg Gly Cys Tyr Ser Val Ala
485 490 495

Leu Ser Glu Arg Ile Leu Glu Val Ala Leu Thr Tyr Arg Trp Ala Ser
500 505 510

Asn Pro Arg Ser Glu Arg Leu Tyr Ser Thr Arg Pro Gly Leu Tyr Thr
515 520 525

Arg Pro Ala Ser Asn Ala Ser Pro Val Ala Leu Phe Cys Tyr Ser Ala
530 535 540

Ser Pro Ser Glu Arg Leu Tyr Ser His Ile Ser Ala Ser Asn Ser Glu
545 550 555 560

Arg Ile Leu Glu Cys Tyr Ser Gly Leu Met Glu Thr Leu Tyr Ser Leu
565 570 575

Tyr Ser Ile Leu Glu Thr Tyr Arg Leu Glu
580 585

<210> 74
<211> 0
<212> DNA
<213> Mus sp.

<400> 74
000 3

<210> 75
<211> 0
<212> DNA
<213> Mus sp.

<400> 75
000 3

<210> 76
<211> 0
<212> DNA
<213> Mus sp.

<400> 76
000 3

<210> 77
<211> 0
<212> DNA
<213> Mus sp.

<400> 77
000 3

<210> 78
<211> 0
<212> DNA
<213> Mus sp.

<400> 78
000 3

<210> 79		
<211> 0		
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<213> Mus sp.		
 <400> 79		
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 <210> 80		
<211> 0		
<212> DNA		
<213> Mus sp.		
 <400> 80		
000		3
 <210> 81		
<211> 1202		
<212> DNA		
<213> Homo sapiens		
 <400> 81		
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acaaggagct ggcttgggc taggctgctc cttgcctatg attggggaaag gttaaacc	180	
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taatccttta gggaggcaga aaaggccaga atgcaaagcc atctttcat tacactaggg	360	
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ttcataagaa gacaaagaac ccaataaaaaa tgggcaacag ataccacaga agatgatata	780	
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ccaaccagca ctttggagg ccgaggtggg cgatcatga ggtcaggagt ttgagactag	960	
cctgaccaac atggtaaac cctgtctcta ctaaacatac aaaaattagc tgggggtgg	1020	

ggcatgcgcc tctaattcca gctactcagg aggctgagggc aggagaatcg cttgaaccca 1080
ggagggcagag attacagtga gccgagatca tgcccttgca ctctagcctg ggtgacagag 1140
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gc 1202

<210> 82
<211> 255
<212> DNA
<213> Homo sapiens

<400> 82
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gcttgtgatg acattatttc taataggaa tggaaagga tgtagcttc tcaggttta 180
aagtgtcctg gaggagaaga gaaaggacga catgagaagg agacaatgaa gaagatgggt 240
gagggggaga tagtg 255

<210> 83
<211> 85
<212> PRT
<213> Homo sapiens

<400> 83

Met Gln Ser His Leu Phe Ile Thr Leu Gly Ser Val Phe Leu Leu Leu
1 5 10 15

Trp Ala Phe Ile Trp Gly Gly His Val Ser Pro Thr Trp Asn Ser Glu
20 25 30

Pro Gly Gln Asp Ser Asn Leu Trp Ala Cys Asp Asp Ile Ile Ser Asn
35 40 45

Arg Glu Trp Glu Arg Met Leu Ala Ser Gln Val Leu Lys Cys Pro Gly
50 55 60

Gly Glu Glu Lys Gly Arg His Glu Lys Glu Thr Met Lys Lys Met Gly
65 70 75 80

Glu Gly Glu Ile Val
85

<210> 84

<211> 23
<212> PRT
<213> Homo sapiens

<400> 84

Met Gln Ser His Leu Phe Ile Thr Leu Gly Ser Val Phe Leu Leu Leu
1 5 10 15

Trp Ala Phe Ile Trp Gly Gly
20

<210> 85
<211> 62
<212> PRT
<213> Homo sapiens

<400> 85

His Val Ser Pro Thr Trp Asn Ser Glu Pro Gly Gln Asp Ser Asn Leu
1 5 10 15

Trp Ala Cys Asp Asp Ile Ile Ser Asn Arg Glu Trp Glu Arg Met Leu
20 25 30

Ala Ser Gln Val Leu Lys Cys Pro Gly Gly Glu Lys Gly Arg His
35 40 45

Glu Lys Glu Thr Met Lys Lys Met Gly Glu Gly Glu Ile Val
50 55 60